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#### ABSTRACT

This report examines the efficacy of the Boston Pilot Schools, an innovative model of urban schools created to promote innovation and increased choice options within the Boston school district. The report uses school and district level data to examine student demographics, achievement, and engagement at the 11 Pilot Schools that were in operation for over 1 year. Overall, while the Pilot Schools serve a student population generally representative of the Boston Public Schools, their students perform well on all available measures of student engagement and performance and are among the top performing of all Boston Public Schools. This report concludes that with an enrollment roughly mirroring the district's student population, the Pilot Schools have succeeded in creating communities of learning which meet students academic and emotional needs. These schools have low grade retention and high graduation rates and send significantly more students on to postgraduate education. The Pilot Schools succeed because their status, with autonomy from the district over budget, staffing, scheduling, governance, and curriculum, allows them to create unified learning communities. Their smallness allows staff and students to know each other well, and structures such as smaller learning communities and advisories allow relationships among school community members to build over time. (Contains 12 references.) (SM)



# **How Are Boston Pilot School Students Faring?** Student Demographics, Engagement, and Performance 1997-2002

Center for Collaborative Education 1135 Tremont Street, Suite 490 Boston, MA 02120

October 2003

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# How Are Boston Pilot School Students Faring? STUDENT DEMOGRAPHICS, ENGAGEMENT, AND PERFORMANCE, 1997-2002

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# How Are Boston Pilot School Students Faring? Student Demographics, Engagement, and Performance, 1997-2002

# **EXECUTIVE SUMMARY**

This is the second annual report examining the efficacy of the Boston Pilot Schools, an innovative model of urban schools created in 1994 to promote innovation and increased choice options within the Boston school district. Unlike most urban public schools, the Boston Pilot Schools have control over budget, staffing, curriculum, governance, and time, all critical conditions to building a unified learning community in which teaching and learning are personalized and of high quality. They represent a new vision of public schools and districts in which schools are provided flexibility to create challenging learning environments in exchange for increased accountability.

Today, there are nineteen Boston Pilot Schools spanning grades K-12. This report examines student demographics, achievement, and engagement at the eleven Pilot Schools that have been in operation for more than one year. These eleven schools are serving approximately 2,750 students, or 4% of the total Boston Public Schools (BPS) enrollment. The student assignment process is the same for Pilot elementary and middle schools as for BPS. Pilot high schools have special admissions processes that screen for fit and commitment to the school's philosophy; prior academic achievement is not a factor.

For urban, mostly low-income students and students of color, there is an urgency to develop models of schooling that provide greater access to high quality education. How are students in the Pilot Schools faring, especially as compared to their counterparts in regular BPS schools? Do the Pilot Schools' conditions of smallness and autonomy over resources improve student engagement and performance?

This report examines quantitative indicators of Pilot Schools on three levels: 1) student demographics, 2) student engagement, and 3) student performance. Data in this report was received from the Boston Public Schools and individual Pilot Schools<sup>1</sup>. The report's primary finding is as follows:

While the Pilot Schools serve a student population generally representative of the Boston Public Schools, Pilot School students perform well on all available measures of student engagement and performance, and are among the top performing of all Boston Public Schools.

<sup>&</sup>lt;sup>1</sup> The views, findings, and opinions of the authors in this article do not necessarily reflect those held by the City of Boston or the Boston Public Schools.



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## Student Demographics

- The Boston Pilot Schools K-12 student population is generally representative of the larger BPS student population, with some variation by school level. While serving a similar percentage of African American and Asian American students, Pilot Schools serve a slightly higher percentage of White students and a smaller percentage of Hispanic students than the BPS district average. With the addition of eight new Pilot Schools, Pilot demographics will even more closely resemble that of the district.
- Pilot high schools serve significantly more African-American students and less Asian-American students than the non-Pilot high schools in the district.
- Pilot elementary schools serve a larger percentage of White students and a lower percentage of African-American and Asian-American students than the non-Pilot high schools in the district.
- Pilot middle schools serve a higher percentage of Asian-American students and a lower percentage of Hispanic students than the non-Pilot high schools in the district.
- Pilot middle and high schools serve a percentage of low-income students that is similar to the district average, while Pilot elementary schools serve a significantly lower percentage of low-income students than the district average. Pilot Schools serve similar percentages of special education mainstream students, and a lower percentage of bilingual students.
- Pilot Schools enroll a smaller percentage of students classified as substantially separate, but have begun enrolling substantially separate students at higher rates in the 2003-2004 school year. Five of the six conversion Pilot schools have programs for substantially separate students, as do three new Pilots and two of the eleven older Pilot Schools have gained inclusion status from the district while two others have begun programs for substantially separate students.

# Student Engagement

- Pilot Schools rank among the BPS schools with the highest student attendance rates, reflecting high levels of student engagement.
- Pilot Schools have among the highest student wait lists of any BPS schools. This desirability has remained stable or increased over time, signaling the attraction of Boston families and students to small, personalized schools.
- Pilot middle and high schools have a significantly lower percentage of students who transfer out of school than does the BPS district average, signaling higher "holding power" than regular BPS schools.
- Pilot Schools have among the lowest suspension rates of all BPS schools, indicating that they are safe and personalized cultures.

# Student Performance

#### **MCAS**

- Pilot elementary schools perform at or above the system average in English Language Arts and Math, with one school one of the top performing schools in the district.
- Four of the five Pilot schools that serve middle schools students performed at or above the system average in all three subjects in 2001-2002.



• Three of the six Pilot high schools had MCAS scores ranked in the top of Boston high schools, placing just behind the exam schools in English Language Arts and Mathematics. Two high schools serve students that have previously been unsuccessful at other BPS high schools.

#### Retention, Graduation, and Post Graduation Plans

- Pilot Schools have significantly low grade retention rates, a key predictor of dropping out of school. Pilot Schools' favorable scores on the MCAS suggest that these low retention rates are more due to students meeting the requirements for promotion to the next grade, rather than an indication of social promotion.
- Pilot high schools have both high rates of graduation and high rates of students planning to attend college. The rate of Pilot high school graduates planning to attend college, and in particular four-year colleges, is dramatically greater than the BPS district average.

# Changes from 2001/2002 from 2000/2001

Although the purpose of this report is to examine the efficacy of Pilot Schools over many years, it is also important to note changes in performance over the last two years. Pilot School demographics from each year are very similar. Our primary finding is that Pilot Schools performance on indicators of student engagement and performance is very high and has remained consistent over time. We do note the following changes from student performance indicators:

- The Harbor School significantly lowered the number of students suspended, from 6% in 2000-2001 (a rank of 13) to .4% in 2001-2002 (the lowest suspensions of any school). The current figure is more typical of the school—Harbor school had the lowest number of suspensions in any middle school from 1997-2000.
- Four schools—Greater Egleston, Harbor, Young Achievers, and Lyndon—had an increase in the number of in-district transfers, although all were still in the top third of schools with the fewest transfers.
- One school—New Mission High School-- had a decrease in the number of in-district transfers.

#### **Conclusions**

The findings in this report demonstrate that the Boston Pilot Schools continue to serve their students commendably. With an enrollment roughly mirroring the district's student population, the Pilot Schools have succeeded in creating communities of learning which meet students' academic and emotional needs. Across indicators of student engagement, Pilot Schools have among the highest attendance and longest wait lists and among the lowest suspensions and transfers out in the district. By standardized test scores, Pilot Schools students score at or above the district average in all subjects. These schools have low grade retention rates, high rates of graduation, and send significantly more of their students on to post-graduate education.

How do Pilot Schools achieve success with their students? Their status as Pilot Schools, with autonomy from the district over budget, staffing, scheduling, governance, and curriculum, allows



them to create unified learning communities. Their smallness allows staff and students to know each other well, and structures such as smaller learning communities and advisories allow relationships among school community members to build over time.

The Boston Pilot Schools have begun to demonstrate that when urban public schools are provided increased autonomy and flexibility to adopt innovative practices, and are held accountable for their results, student outcomes across a range of indicators improve. These findings have significant implications for the future of urban public education and suggest a movement toward creating small schools and providing these schools with greater autonomy over their resources as a key vehicle for improving urban student engagement and performance.



# How Are Boston Pilot School Students Faring? Student Demographics, Engagement, and Performance, 1997-2002

Accumulating evidence indicates that many of today's urban public schools are not providing students, particularly low-income students and students of color, with an equitable, high quality education. Progress in raising student achievement has been slow and incremental (U.S. Department of Education, 2002; Sadowski, 2001). A stubborn gap persists in access to educational opportunities and in academic expectations of White students and Black, Hispanic, and low-income students (i.e., Oakes, 1985; Rolon, 2002). With the nation's population growing increasingly diverse, our schools are leaving many of our students behind. As a result, there is a declining level of confidence and support in our nation's public schools, particularly for urban schools, and a corresponding increase in the use of charter schools, school choice, and voucher programs as policy solutions (i.e., Finn et al, 2000; Nappi, 1999).

The Boston Pilot Schools are a unique innovation in public schooling. The result of a partnership among the Mayor, School Committee, Superintendent, and Teachers Union, Boston Pilot Schools were created in 1994 to promote increased choice options within the school district, largely in response to 1994 state legislation creating first-time charter schools and the anticipated loss of Boston students to area charter schools. The Pilot Schools were intended to be models of educational innovation and to serve as research and development sites for effective urban public schools. "The purpose of establishing Pilot Schools is to provide models of educational excellence that help to foster widespread educational reform in all Boston public schools (Boston Public Schools, 1995)."

Pilot Schools represent a new vision of public schools and districts in which schools are provided maximum flexibility to create challenging learning environments, and the role of the school district is recast to provide these schools with increased support. Pilot Schools are given charter-like autonomy over budget, staffing, curriculum, governance, and time. In 1997, the Pilot Schools and the Center for Collaborative Education, a nonprofit organization dedicated to school reform, formed the Boston Pilot Schools Network.

A unique feature of Pilot Schools is that they operate within the Boston Public Schools (BPS), unlike charter schools. All Pilot School teachers are members of the Boston Teachers Union, receive union salaries and benefits, and accrue seniority. This attachment with the district provides the opportunity for Pilot School practices and conditions to influence the larger BPS system, while providing Pilot Schools with the economy of scale advantages of facilities, payroll, and transportation, among others.

Pilot schools will operate with an average school-based per pupil budget, plus a start-up supplement, and will have greatly increased decision-making authority, including exemptions from all Union and School Committee work rules...Employees in Pilot schools will be required to work the full work day/work year as prescribed by the terms of the individual Pilot school proposal. Further,



they shall be required to perform and work in accordance with the terms of the individual Pilot school proposal. (Boston Teachers Union Contract, 1994)

Today, there are nineteen Boston Pilot Schools spanning grades K-12 and serving approximately 6,100 students, or 9.5% of the total Boston Public Schools enrollment. For urban districts that serve predominantly low-income students and students of color, the urgency to develop models of schooling that provide greater access to quality education demands that we consider the questions: How are students in Pilot Schools faring? How do the Pilot Schools' conditions of smallness and autonomy over budget, staffing, curriculum, governance, and time improve student engagement and achievement?

#### **FINDINGS**

We believe that improvement in student outcomes should be examined through multiple lenses. This report examines quantitative indicators of practice on the Boston Pilot Schools on three levels: (1) student demographics, (2) student engagement, and (3) student achievement. Data used in this report was received from the Boston Public Schools and individual Pilot Schools<sup>2</sup>.

Of the nineteen current Pilot Schools in the Network, thirteen operated with Pilot School status in 2002-2003. However, Tech Boston opened in 2002 and Boston Community Leadership Academy was a Boston Public school that opted for Pilot status in 2002 and so neither are included in this report. This report examines student demographics, achievement, and engagement at the eleven Pilot Schools that have been in operation for more than one year.

<sup>&</sup>lt;sup>2</sup> The views, findings, and opinions of the authors in this article do not necessarily reflect those held by the City of Boston or Boston Public Schools.



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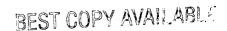
Table 1: List of Pilot Schools

	Grades served	Year Opened (Year Pilot Status if different)
P	ilot Schools included in this repor	·t
Boston Arts Academy	9-12	1998
Boston Evening Academy	9-12	1998
Fenway High School	9-12	1983 (1995)
Greater Egleston Community High School	9-12	1992 (1996)
Health Careers Academy	9-12	1998
New Mission High School	9-12	1997
Harbor School	6-8	1997
Quincy Upper School	6-9 (adding one grade per year to grade 12)	1999
Lyndon School	K-8	1995
Mission Hill School	K-8	1997
Young Achievers Science and Math School	K-8	1995
	Newly opened Pilot Schools	
Orchard Gardens	K-8	2003
New Boston Middle School	6-8	2003
Tech Boston	9-12	2002
	Conversion Pilot Schools	
Boston Community Leadership Academy	9-12	(2002)
Another Course to College	9, 11-12 (adding grade 10 in 2004)	(2003)
Mason Elementary	K-6	(2003)
Lee Elementary	K-6	(2003)
North Zone Early Childhood Center	K0-grade 1	(2003)

# STUDENT DEMOGRAPHICS

Finding: Pilot Schools enroll a K-12 student population that is generally representative of the Boston Public Schools' student enrollment, although the percentage of low-income students, White students, and bilingual students is lower than the BPS district average, mostly the result of two Pilot elementary schools.

As Pilot Schools are a special subset of schools within a larger urban district, it is important to study their enrollment patterns to ensure that the Pilot Schools serve a population that is representative of the entire district.





Student assignment/choice in elementary and middle schools is the same process for Pilot Schools as for all Boston Public Schools. Most schools serve students in their geographic zone, of which there are three in Boston. A few elementary and middle schools serve students citywide, across all three zones. Parents/students may list their first, second, and third choice schools based on their residence zone or based on preference of citywide schools. Citywide schools reserve a percentage of slots for neighborhood children and then open up the remaining slots for the citywide lottery. Two Pilot Schools are citywide schools: Mission Hill School and Young Achievers Science and Math School, both serving grades K-8.

All Boston high schools serve students citywide. Pilot high school admissions are determined by an application, and in some cases, by interviews. However, whereas BPS examination high schools base their admissions on entrance exam scores and grade point averages, Pilot high schools do not use their admissions process to screen students out based on prior academic achievement, but rather to ensure fit and commitment to the school's philosophy.

# Racial Demographics

Finding: The Boston Pilot Schools K-12 student population is generally representative of the larger BPS student population, with some variation by school level3. While serving a similar percentage of African American and Asian American students, Pilot Schools serve a slightly higher percentage of White students and a smaller percentage of Hispanic students than the BPS district average.

The Boston Public Schools<sup>4</sup> serve approximately 63,000 students in 130 K-12 schools, with approximately 48% Black, 28% Latino, 9% Asian, and 15% White students. Eighteen percent of the district's students are designated as special needs, and 21% are students whose first language is not English.

As a whole, the eleven Pilot Schools described in this report served approximately 4% of the BPS population (approximately 2750 students)<sup>5</sup> in the 2001/2002 school year. Pilot Schools student enrolment is very representative of BPS, serving similar percentages of Asian and African-American Students, fewer Hispanic students, and more White students. Pilots serve slightly lower percentages of free/reduced lunch students and a slightly higher percentage of special education mainstream students. It should be noted that there are so few Pilot Schools compared to the district that any one school may alter the racial, ethnic, or low-income composition across the Pilot Schools, and that differences with the district population vary by school level.

In examining the racial breakdown of Pilot Schools by level (in Figures 2-4), Pilot elementary schools serve a significantly greater percentage of White students than the district average, and a

<sup>&</sup>lt;sup>5</sup> When all nineteen Pilot Schools are in operation in 2003-2004, they will enroll approximately 10% of the BPS student population.



<sup>&</sup>lt;sup>3</sup> Throughout this paper, when we compare Pilot Schools to BPS schools, we include all schools listed in Appendix A. At the high school level, exam schools are included in all analyses.

<sup>&</sup>lt;sup>4</sup> Data taken from www.boston.k12.ma.us as of October, 2001.

lower percentage of African American and Asian American students (this is due primarily to the demographics of two of the three schools)<sup>6</sup>. Pilot middle schools serve a similar percentage of African American and White students, while serving a significantly higher percentage of Asian American students and lower percentage of Hispanic students. Pilot high schools serve a significantly greater percentage of African American students than non-Pilot BPS high schools, while serving a lower percentage of White and Asian American students. With the addition of the eight new Pilot Schools, Pilot demographics will more closely resemble that of the district.

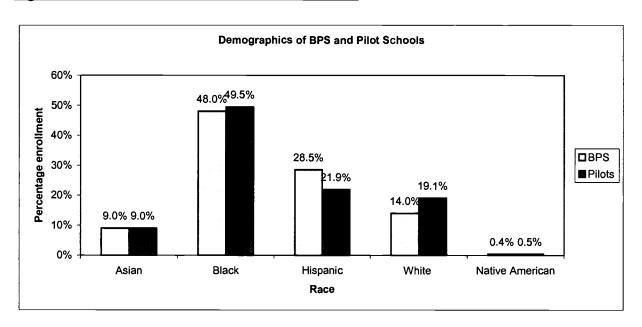


Figure 1. Racial breakdown of BPS and Pilot Schools

The percentages of White students in the three K-8 Pilot Schools are: Young Achievers 13%, Mission Hill 24%, and Lyndon 44%. That Pilot elementary schools serve a significantly higher percentage of White students and lower percentage of African-American students may be due to several factors. One Pilot School, the Lyndon School, is located in a predominantly White neighborhood, and draws heavily from this neighborhood. The other two elementary schools are citywide schools. When a school draws from a citywide pool of applicants, while that school may be located in a racially diverse neighborhood, it may draw families from other neighborhoods for reasons such as curricular philosophy or reputation of leaders. A preliminary study of the pool of accepted applicants from Mission Hill School, with 24% White students, showed that many non-neighborhood families came from predominantly White areas of the city.

<sup>&</sup>lt;sup>6</sup> A number of Boston schools enroll student K-8 or 7-12. Because their numbers are so small, for the purposes of this paper, all K-8 whole school demographic and engagement data are included in the comparison of elementary schools, and all 7-12 schools are included in high schools. Achievement data is separated by grade level.



Research and Evaluation Program

**Demographics of BPS and Pilot Schools: Elementary Schools** 47 3% 50% Percentage of enrollment **B7.8%** 40% 31.7% 30.7% 27.7% 30% **□**BPS ■ Pilots 20% 12.2% 8.4% 10% 3.4% 0.4% 0.3% 0% Asian Black Hispanic White Native American Race

Figure 2. Racial breakdown of BPS and Pilot Schools: Elementary schools

Pilot middle schools serve comparable percentages of African American and White students, while they differ considerably from BPS schools in the numbers of Hispanic and Asian students. Quincy Upper School is a Zone school located in Chinatown, and serves high numbers of Asian students.

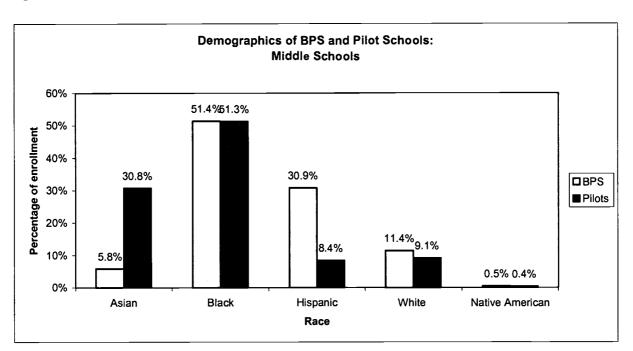


Figure 3. Racial breakdown of BPS and Pilot Schools: Middle schools

Figure 4 shows the breakdown by ethnicity of Boston Public high schools. BPS has three examination high schools that admit students on a competitive basis. They are: Boston Latin Academy in Dorchester, Boston Latin School, O'Bryant School of Mathematics & Science.



Students are admitted to the exam schools based on results of an entrance test and grade point average. Each accounts for 50% of a student's score. The grade point average is based on final marks in English and math from the previous school year and the first two marking periods of the current year<sup>7</sup>.

Pilot high schools serve significantly more African American students and less Asian American and White students than the district. Examination schools serve significantly more White and Asian students and less African American and Hispanic students than does the district.

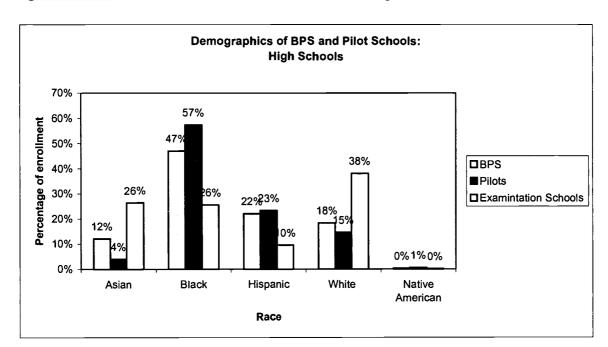


Figure 4. Racial breakdown of BPS and Pilot Schools: High schools

# Other demographic information

Finding: Pilot middle and high schools serve a percentage of low-income students that is similar to the district average, while Pilot elementary schools serve a significantly lower percentage of schools than the district average. Pilot Schools serve similar percentages of special education mainstream students, and a lower percentage of bilingual students.

Figure 5 shows demographic breakdowns of Pilot Schools' enrollments, based on percentage of students receiving free/reduced lunch (a measure of socio-economic status) and percentage of students classified as special education mainstream (Special Education MS) or substantially separate (Special Education SS).

<sup>&</sup>lt;sup>7</sup> http://www.boston.k12.ma.us/schools/assign.asp



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**Demographics of BPS and Pilot Schools** 80% 73.6% 70% 59.4% Percentage Enrollment 60% 50% **□**BPS 40% **■**Pilots 30% 16.5% 20% 8.7% 9.9% 9.8% 10% 3.4% 0.1% 0% Special Ediucation: Free and reduced Special Education: Bilingual MS SS lunch Race

Figure 5. Percent of students by status in Pilot Schools and BPS

Pilot Schools enroll a smaller percentage of students receiving free/reduced lunch than does the district. Pilot elementary schools (Figure 6) serve significantly less than the district average of free/reduced lunch status students, while Pilot middle and high schools serve similar or slightly lower percentages of free/reduced lunch status students.

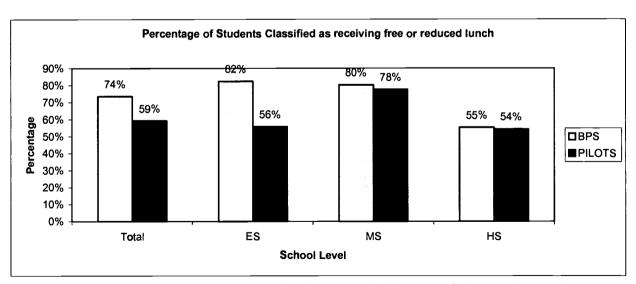


Figure 6. Percentage of students classified as receiving free/reduced lunch, by school level

Pilot Schools enroll an equal percentage of students classified as special education mainstream as does the district. Figure 7 separates the percentages of students classified as special education mainstream by school level. It does not include percentages of students classified as special education substantially separate. As shown in Figure 7, Pilot elementary and high schools serve



slightly higher percentages of these mainstreamed students, while the middle schools serve slightly lower percentages<sup>8</sup>.

Pilot Schools believe that the very nature of their smallness - which includes lower class size, teachers knowing their students well, multi-year student-teacher relationships (looping, multi-age classrooms), multiple adults in the classroom, individual learning plans, and multiple assessments - is an integral aspect in providing students with a continuum of services. These aspects of small schools represent conditions that are often provided solely to special education students. This preventive model of schooling minimizes the over-identification of students with special needs. (Pilot Schools Network Special Education Principles, 2000)

Further, Pilot Schools have begun enrolling substantially separate students at higher rates in the 2003-2004 school year. All five conversion schools have programs for substantially separate students, as do three new Pilots. Two of the eleven older Pilot Schools have gained inclusion status from the district while two others have begun programs for substantially separate students. We anticipate that the percent of substantially separate special education students will more closely mirror the district rate in future years.

Percentage of Students Classified as Special Education: Mainstream, by School Level 14% 12% 12% Percentage 9% 9% 8% 8% 10% 7% BPS 8% 6% ■ PS 4% 2% 0% Total **ES** MS HS School Levels

Figure 7. Breakdown of students classified as special education mainstream by school level

Finally, Pilot Schools enroll a smaller percentage of students who are bilingual than does the district, with the greatest gap at the middle school level and the narrowest gap at the high school level. Only one Pilot School—Lyndon K-8 —has a bilingual program.

In summary, Pilot Schools serve a student population that is generally representative of the larger BPS student population. The most significant differences in Pilot Schools and BPS demographics are in the elementary schools, where Pilot Schools enroll higher percentages of White students and lower percentages of students with free/reduced lunch status. The difference

<sup>&</sup>lt;sup>8</sup> BPS and the Pilot Schools reached an agreement in 2002 to serve substantially separate students in an inclusive setting. Two Pilot Schools, Boston Arts Academy and Young Achievers K-8 Academy, will operate in the 2003-2004 school year as full-inclusion schools.



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in enrollment of bilingual students may be accounted for by the fact that only one Pilot School has a bilingual program.

#### STUDENT ENGAGEMENT

One way to measure school success is to examine how 'engaged' students are in school. Engagement can take many forms in school, such as high attendance, low numbers of discipline problems, and high interest in attending a school. Engaged students are more likely to learn, as they are more likely to be in school, and, when in school, more likely to be in the classroom than in the principal's office. This section presents information on the following student engagement indicators:

- Average daily attendance
- Number of students on waiting list
- Number of students who transfer out of a school within district
- Number of students suspended

#### **Student Attendance**

Finding: Pilot Schools rank among the BPS schools with the highest student attendance rates, reflecting high levels of student engagement.

High attendance in school is important because students who are not in school are not as able to learn and take advantage of the opportunities their school offers. Research on small schools has demonstrated that students in small schools have higher attendance than students in large schools (Cotton, 1996). High attendance has been positively correlated with higher student achievement. In examining student attendance data across all BPS schools from 1997/1998-2001/2002, we found that eight of the eleven Pilot Schools have among the highest attendance rates of all schools in the district.

# Attendance in Pilot high schools9

Boston Pilot high schools have consistently had among the highest student attendance of all Boston high schools, including exam schools. In 1997, Fenway and New Mission High Schools ranked first and second among non-exam schools in attendance. From 1998/1999-1999/2000, Fenway, New Mission, Health Careers Academy, and Boston Arts Academy have been among the top five non- exam schools in attendance, and New Mission has had the highest overall attendance of all schools in the city the past two years. Table 2 shows the student attendance percentage of each school for each of the last four years (in descending order left to right), as well as the corresponding rank for that year. We list schools according to rank in 2001/2002 school year and highlight the Pilot Schools. Note that both Greater Egleston Community High School and Boston Evening Academy serve populations of students that have previously had unsuccessful experiences in other BPS schools and enroll students in these schools with patterns of low attendance and academic achievement. Therefore, they would be expected to have lower attendance rates than other high schools.

<sup>&</sup>lt;sup>9</sup> See Appendix A for a list of comparison schools for all levels.



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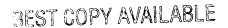
Table 2. Student attendance rates in BPS high schools, 1997/1998-2001/2002

School Name	2001	/2002	2000	0/2001	1999	0/2000	1998	3/1999	1997	7/1998
	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
New Mission	1	98.0%	1	98.6%	1	97.7%	11	86.2%	5	89.9%
*Boston Latin	2	95.5%	2	94.8%	2	94.9%	2	94.4%	1	94.2%
Health Careers Academy	3	95.3%	6	92.4%	3	94.4%	7	90.5%		
*O'Bryant	4	94.7%	5	92.8%	4	94.0%	1	95.0%	2	93.6%
*Latin Academy	5	94.1%	3	94.2%	5	93.6%	4	93.7%	3	93.2%
Fenway	6	93.8%	4	93.0%	8	90.6%	6	90.6%	4	90.5%
Boston Arts Academy	7	93.2%	7	89.3%	6	91.4%	3	94.3%		
Boston Adult Academy	8	91.7%	17	83.0%						
Snowden International	9	90.2%	9	88.3%	10	88.4%	8	89.1%	9	85.2%
ACC	10	88.4%	8	89.1%	7	90.9%	5	91.8%	6	88.6%
West Roxbury	11	87.6%	12	85.9%	14	84.9%	9	87.5%	7	85.5%
Burke High	12	87.4%	10	87.7%	9	88.8%	10	87.4%	8	85.3%
East Boston High	13	86.2%	11	86.6%	11	86.1%	17	81.0%	11	82.4%
Boston High	14	86.1%	13	84.6%	18	81.7%	20	78.9%	17	78.8%
Charlestown High	15	85.1%	20	80.0%	17	82.6%	14	84.2%	13	80.8%
Brighton High	16	84.0%	16	84.1%	15	83.3%	12	85.7%	12	82.2%
Madison Park High	17	83.7%	14	84.5%	13	84.9%	15	84.2%	14	80.5%
Hyde Park High	18	83.6%	18	81.8%	16	82.7%	16	81.4%	15	80.0%
English High	19	82.3%	15	84.3%	12	85.1%	13	85.5%	10	85.1%
South Boston High	20	81.6%	21	79.4%	19	80.2%	18	80.3%	16	79.1%
Dorchester High	21	78.9%	19	80.2%	20	80.1%	19	80.1%	19	75.8%
Egleston Community	22	72.3%	22	59.1%	21	60.2%	21	65.6%	20	71.0%
Boston Evening Academy**  * Examination Sch									18	76.3%

<sup>\*</sup> Examination School

#### Attendance in Pilot middle schools

The range of overall average attendance rates for BPS regular middle schools from 1997/1998-2001/2002 was 88.5%-94.0%. Of the twenty Boston middle schools that have been open since 1997<sup>10</sup>, the Harbor School ranks third in overall average attendance during that time at 93.7%,





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<sup>\*\*</sup> As a Horace Mann Charter School, BEA chose not to submit attendance data.

<sup>&</sup>lt;sup>10</sup> Josiah Quincy Upper School opened in 1999.

and in the last four years has never had overall attendance drop below 92.3%. Josiah Quincy Upper School, which opened in 1999, has had the highest attendance in the city both years, averaging 97.5%. Table 3 shows the student attendance percentage at each school for each of the last four years, as well as the corresponding rank for that year. Again, schools are listed in order of rank in 2001/2002 (in descending order left to right), and Pilot middle schools are highlighted.

Table 3. Student attendance rates and rank in BPS middle schools, 1997/1998-2001/2002

School Name	2001	/2002	2000	/2001	1999	/2000	1998	/1999	1997/1998	
	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
Quincy Upper School	1	97.3%	1	97.5%	1	97.8%				
Harbor School	2	95.3%	3	94.0%	5	93.7%	8	92.3%	2	93.2%
Timilty Middle	2	95.3%	2	94.9%	3	94.1%	2	94.1%	4	92.9%
Lewenberg Middle	4	94.9%	4	93.6%	7	93.0%	6	92.5%	10	91.2%
Rogers Middle	5	94.2%	5	93.5%	4	93.9%	3	93.9%	3	93.2%
Wilson Middle	6	93.6%	6	93.4%	9	92.5%	9	92.1%	7	92.1%
Curley Middle	7	93.4%	10	91.9%	10	92.2%	1	94.8%	6	92.2%
Irving Middle	8	93.2%	7	93.1%	6	93.3%	5	92.8%	5	92.6%
McCormack Middle	9	92.8%	12	91.4%	13	91.3%	18	90.6%	16	89.6%
Dearborn Middle	10	92.4%	9	92.1%	8	92.5%	4	93.6%	1	93.6%
Shaw Middle	11	92.1%	14	90.8%	14	91.3%	14	91.6%_	11	91.2%
Cleveland Middle	12	91.4%	20	89.4%	21	87.3%	19	89.8%	19	87.4%
Umana/Barnes Middle	12	91.4%	15	90.7%	15	91.2%	11	91.9%	13	90.6%
Edison Middle	14	91.3%	11	91.4%	12	91.3%	13	91.6%	12	90.9%
King Middle	15	91.0%	18	90.0%	18	90.2%	20	88.1%	20	86.7%
Lewis Middle	15	91.0%	19	89.9%	19	89.9%	15	91.2%	15	89.9%
Wheatley Middle	17	90.3%	17	90.2%	2	94.5%	10	92.0%	18	89.0%
Thompson Middle	18	90.2%	8	93.0%	17	90.6%	16	91.2%	14	90.4%
Taft Middle	19	90.1%	13	91.4%	11	92.0%	7	92.5%	9	91.3%
Edwards Middle	20	89.9%	16	90.5%	16	90.7%	12	91.8%	8	91.4%
Gavin Middle	21	88.7%	21	89.1%_	20	89.0%	17	90.8%	17	89.0%

#### Attendance in Pilot elementary schools

Two of the three Pilot elementary schools have consistently had among the highest attendance rates in the city since 1997. Over these five years, the three Pilot elementary schools have had an average attendance of 96% (Mission Hill), 95.6% (Young Achievers), and 94.8% (Lyndon). Of the 79 elementary schools that have been open the last four years, Pilot Schools ranked 7<sup>th</sup>, 14<sup>th</sup>, and 32<sup>nd</sup>, respectively, in attendance. The average overall attendance in elementary schools during this period has ranged from 92.8%–97.2%.

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#### Student Wait List

Finding: Pilot Schools have among the longest student wait lists of any BPS schools.

This desirability has remained stable or increased over time, signaling the attraction of Boston families and students to small, personalized schools.

Examining the number of students on a school's wait list is an indication of interest by families in that school. High interest could result from the school's location, programming, academic reputation, or other reasons raising "popularity." Pilot Schools' elementary and middle schools participate in the regular lottery system of controlled choice for schools. Families may list their first, second, and third choices of schools. Pilot Schools are small, so the number of slots open each year is quite low.

This section examines school waiting list data from 1997/1998-2001/2002 for middle and elementary schools. Because Pilot high schools do not have their waiting list compiled by the school district, we do not compare the waiting list numbers for high schools. We find that:

- Both Pilot middle schools are among the top five of the 21 middle schools requested by Boston families, based on total numbers of students on the waiting list
- All three Pilot elementary schools are among the top ten most requested of the 79 Boston elementary schools in total numbers of students on the waiting list
- Young Achievers Elementary School has had the highest total number of students on the waiting list of any elementary school in four of the last five years, and had the second highest in 1998.

Because Pilot Schools also demonstrate high levels of engagement and achievement outcomes, we argue that long wait lists result from the quality academic reputations of Pilot Schools. This was confirmed by the Center for Collaborative Education in a recent review of student applications to Pilot high schools, which found that the two most prominent reasons for students choosing to apply to Pilot high schools were their challenging academic reputations and a culture of personalization (smallness, being known well by adults, and safety) (Doyle et al, 2003). High wait list numbers suggest that additional Pilot Schools would be embraced by families in Boston.

#### Pilot middle school wait lists

Boston Pilot middle schools have had among the longest waiting lists of any middle school in Boston, equal to or greater than their actual enrollments. Table 4 shows, for the Harbor and the Josiah Quincy Upper Schools<sup>11</sup>, the overall enrollment at the school each year, the number of students on the waiting list, and the percentage of students on the wait list as compared to the overall enrollment at the school.

<sup>&</sup>lt;sup>11</sup> Note that both the Harbor School and Quincy Upper 'rolled out' one grade at a time. Harbor opened with a 6<sup>th</sup> grade in 1997, added a 7<sup>th</sup> grade in 1998, and an 8<sup>th</sup> grade in 1999. Quincy Upper opened with a 6<sup>th</sup> grade in 1999, added a 7<sup>th</sup> grade in 2000, and an 8<sup>th</sup> grade in 2001.



-

Table 4. Number of students on waiting list in Boston Pilot middle schools from 1997-2001

School year	Total students enrolled	Number of students on wait list	Students on wait list as a percentage of total enrollment
		Harbor School	
1997/1998	58	187	322%
1998/1999	90	132	147%
1999/2000	208	178	86%
2000/2001	255	105	41%
2001/2002	261	106	41%
		Josiah Quincy Upper School	
1999/2000	95	2	2%
2000/2001	200	89	45%
2001/2002	275	92	33%

The Pilot middle schools have ranked at the top of all Boston middle schools for both the total number of students on the waiting list and the number of students on the waiting list as a percentage of the school's size. Table 5 shows the rankings of the Pilot middle schools when compared to all BPS middle schools for these categories for each school year since 1997 (in descending order left to right).

Wait list data indicate that Pilot Schools are desirable among families, and that their desirability remains stable over time.

Table 5. Wait list figures for Pilot middle schools: Rank by total numbers and as a percentage of enrollment

School	2001	/2002	2000/2001		1999	/2000	1998	/1999	1997/1998	
	Total number rank	% of students rank								
Harbor School	5	2	5	3	4	2	4	2	3	1
Josiah Quincy Upper School	6	3	6	2	20	19	N/a	N/a	N/a	N/a

#### Pilot elementary school wait lists

Like the Pilot middle schools, Pilot elementary schools are also highly sought after by parents. The Young Achievers School, for example, has had the highest numbers of students on the waiting list in four of the last five years for all elementary schools, with 983, 814, 773, and 688 students waiting to enroll in the school—the school only had a total enrollment ranging from 230-275 students in these years. We note that both Young Achievers and Mission Hill School, as citywide schools, draw from a larger pool of applicants than do zone schools.

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The Pilot elementary schools have ranked at the top of all Boston elementary schools for both the total number of students on the waiting list and the number of students on the waiting list as a percentage of the school's size. Table 6 shows the rankings of the Pilot elementary schools when compared to all BPS elementary schools for these categories for each school year since 1997.

<u>Table 6. Wait list figures for Pilot elementary schools: Rank by total numbers and as a percentage of enrollment</u>

School	2001/2002		2000/2001		1999	1999/2000		/1999	1997/1998	
	Total number rank	% of students rank								
Lyndon Elementary	2	5	4	8	5	5	26	15	26	12
Mission Hill Elementary	4	2	5	2	6	3	8	4	79	79
Young Achievers	1	1	1	1	1	1	2	1	1	1

Elementary school wait list numbers show that Pilot Schools are popular among families, and that they have become more sought after since their establishment.

# **Student Mobility**

Finding: Pilot middle and high schools have significantly lower students transfer out of school than does the BPS district average, signaling higher "holding power" than regular BPS schools.

Student mobility greatly affects educational performance. A school's level of student mobility includes both transfers in and transfers out of school. Transfers out of a school to another school in the district may indicate that a school is not meeting the needs of a child or that the child/family is dissatisfied with the school. Generally, students who remain in one school through promotion or graduation have a greater chance of achieving at high levels, because of continuity of curriculum and instruction, than students who move from one school to another.

This section examines data from the 2000/2001-2001/2002 school years for students who transferred from one BPS school to another BPS school. A low percentage of students who transfer out of a school to another BPS school suggests that students are highly satisfied with the school. For Pilot Schools:

- The Pilot high schools had among the eight lowest rates of students transferring to another Boston school during 2000/2001 and 2001/2002, especially among non-exam schools
- One Pilot middle school had the lowest rate for students transferring to another Boston school during 2000/2001 and 2001/2002, and the other was 2<sup>nd</sup> and 7<sup>th</sup> respectively
- The Pilot elementary schools were in the middle third of all elementary schools for students transferring to another Boston school during 2000/2001 and 2001/2002



Center for Collaborative Education

#### Pilot high school transfers within district

The six Boston Pilot high schools have the lowest rates of students transferring within the district among non-examination schools; all five have rates of 6% or less. The median rate for all non-Pilot Boston high schools in 2000/2001 is 7% and in 2001/2002 is 8.5%. Schools are listed by rank and Pilot Schools are highlighted.

<u>Table 7. Within-district transfers for BPS high schools, by rank and percentage of student body transferring out</u>

Sahaal Nama	2001.	/2002	2000/2	2001
School Name	Rank	%	Rank	%
Health Careers Academy	1	1.1%	4	3%
Boston Evening Academy	2	1.7%	2	1%
*Latin Academy	3	1.9%	9	6%
Boston Arts Academy	4	2.1%	4	3%
*Boston Latin	5	2.5%	3	2%
ACC	_6	4.2%	4	3%
*O'Bryant	7	4.4%	9	6%
Egleston Community High	8	4.9%	1	0%
Fenway	9	5.6%	7	4%
New Mission	10	5.9%	15	9%
Madison Park High	11	6.2%	11	7%
Snowden International	12	6.8%	7	4%
Hyde Park High	13	7.5%	11	7%
Burke High	14	8.1%	11	7%
Dorchester High	15	8.5%	15	9%
South Boston High	16	9.4%	19	11%_
Brighton High	17	9.6%	19	11%
English High	18	11.2%	14	8%
West Roxbury High	18	11.2%	18	10%
Boston Adult Academy	20	11.7%	15	9%
Charlestown High	21	15.8%	22	26%
Boston High	22	17.5%	21	19%
East Boston High	23	22.4%	23	34%

<sup>\*</sup> Examination school

#### Pilot middle school transfers within district

The Boston Pilot middle schools had the lowest percentages of students transferring within the district in the 2000/2001 school year, with rates of 2% and 4%. Quincy Upper School also had the lowest transfer rate in 2001/2002, with Harbor still in the top third of all middle schools. The median rate for all non-Pilot Boston middle schools is 9%.

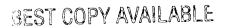




Table 8. Within-district transfers for BPS middle schools, by rank and percentage of student body transferring out

School Name	2001/	/2002	2000/2	2001
	Rank	%	Rank	%
Quincy Upper School	1	1.1%	1	2%
Timilty Middle	2	4.1%	6	8%
Irving Middle	3	7.5%	6	8%
Lewenberg Middle	4	7.9%	6	8%
McCormack Middle	5	8.1%	6	8%
Wilson Middle	6	8.2%	6	8%
Harbor School	7	8.4%	2	4%
Thompson Middle	8	8.7%	11	9%
Curley Middle	9	8.9%	4	7%
Shaw Middle	10	9.0%	15	12%
Gavin Middle	11	9.1%	11	9%
Edison Middle	12	10.5%	11	9%
Taft Middle	13	10.6%	4	7%
Edwards Middle	13	10.6%	17	14%
Dearborn Middle	15	11.0%	3	6%
Lewis Middle	16	11.2%	16	13%
King Middle	17	11.4%	17	14%
Rogers Middle	18	11.8%	14	11%
Cleveland Middle	19	15.2%	21	16%
Wheatley Middle	20	16.1%	22	18%
Umana/Barnes Middle	21	16.4%	19	15%

#### Pilot elementary school transfers within district

Of the 79 Boston elementary schools, the three Boston Pilot elementary schools rank near the top by the percentage of students' transferring out of the Pilot School but within the district in both 2000/2001 and 2001/2002. The median rate for non-Pilot Boston elementary schools in 2000/2001 was 7.5% and for 2001/2002was 10.8%.

<u>Table 9. Within-district transfers for Pilot elementary schools, by rank and percentage of student body transferring out</u>

School Name	200	1/2002	2000/2001		
	Rank	Percentage	Rank	Percentage	
Mission Hill School	1	1.2%	1	0.0%	
Young Achievers	19	7.0%	2	1.0%	
Lyndon Elementary	38	10.3%	22	5.2%	



## **Student Discipline**

Finding: Pilot Schools have among the lowest suspension rates of all BPS schools, indicating that they are safe and personalized cultures.

Students who are engaged in academics are less likely to have discipline problems, and not surprisingly, students who have behavior problems are less likely to learn. Student suspension rate is one indicator of student discipline in schools. This section presents data from 1997/1998-2001/2002 and includes the findings that:

- Pilot high schools have among the lowest student suspension rates for all schools within the district
- Both Pilot middle schools have among the lowest student suspension rates of all BPS middle schools
- Two of the three Pilot elementary schools have among the lowest student suspension rates of all BPS elementary schools

The suspensions we report include only out of school suspensions. The percentage calculations were based on the number of students suspended and the May enrollment figures for each school year in order to control for the size of the school. They do not take into account the number of suspension occurrences (students with multiple suspensions) or the fact that enrollments change throughout the school year.

#### Pilot high school suspensions

Since 1997, the Pilot high schools have had among the lowest percentage of students suspended of all Boston high schools. In fact, in the last five years, BEA and Egleston have had no suspensions; in four and three of the last five years, respectively, New Mission and Fenway have had no suspensions; and in two of the four years that BAA has been open and that HCA has been a separate school, they have had no students suspended. Except for ACC, which became a Pilot school in the 2003-2004 school year, all other Boston high schools have had students suspended in at least four of the last five years. All schools with no suspensions are small schools.

Table 10 shows where all 22 Boston high schools ranked in the percentage of students suspended, and provides that percentage. Schools are listed by rank in 2001/2002, with Pilot Schools highlighted (descending by year from left to right).



<u>Table 10. Student suspensions: Percentage of students suspended and rank among BPS high schools, by year</u>

Schools	2001	/2002	2000	/2001	1999	/2000	1998	/1999	19971998	
	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
ACC	1	0%	1	0%	10	1%	15	7%	1	0%
Boston Evening Academy	1	0%	1	0%	1	0%	1	0%	1	0%
Egleston Community High	1	0%	1	0%	1	0%	1	0%	1	0%
New Mission	1	0%	6	1%	1	0%	1	0%	1	0%
Fenway	5	0.4%	1	0%	1	0%	12	4%	1	0%
Health Careers Academy	6	0.6%	8	2%	1	0%	1	0%		
Boston Arts Academy	7	0.8%	8	2%	1	0%	1	0%		
*Boston Latin	8	1.1%	8	2%	10	1%	6	1%	10	2%
East Boston High	9	1.3%	11	3%	12	2%	11	3%	13	6%
*O'Bryant	10	1.4%	1	0%	1	0%	6	1%	7	1%
West Roxbury	11	1.9%	11	3%	12	2%	6	1%	7	1%
*Latin Academy	12	2.2%	6	1%	1	0%	6	1%	7	1%
English High	13	2.6%	11	3%	21	20%	20	17%	14	8%
Charlestown High	14	2.9%	16	11%	1	0%	19	15%	17	13%
Snowden International	15	3.4%	17	15%	18	11%	16	8%	16	9%
Dorchester High	16	6.5%	15	8%	17	8%	17	10%	10	2%
Brighton High	17	11.4%	18	17%	20	16%	21	22%	18	14%
South Boston High	18	12.0%	11	3%	12	2%	6	1%	12	3%
Burke High	19	12.3%	22	23%	22	27%	22	29%	20	25%
Madison Park High	20	20.0%	21	20%	12	2%	13	5%	19	18%
Boston High	21	25.0%	20	19%	16	4%	13	5%	1	0%
Hyde Park High	22	30.6%	19	18%	19	13%	18	11%	14	8%

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## Pilot middle school suspensions

Boston Pilot middle schools have also had among the lowest percentage of students suspended among all middle schools, although Harbor School had an increase in 2000/2001. From the 1997/1998 through the 1999/2000 school year, Harbor Middle School did not suspend a single student. In 2000/2001, Harbor School ranked 13th among all Boston Middle schools, with a suspension rate of 6%. In 2001/2002, Harbor School again had the lowest number of suspensions of all middle schools in the city. Josiah Quincy Upper School ranked 10<sup>th</sup>, 2<sup>nd</sup>, and 2<sup>nd</sup> with suspension rates of 3%, 2%, and .7% respectively, since its opening in 1999. Table 11 lists percentage of students suspended and school rank (descending by year from left to right).

Table 11. Student suspensions: Percentage of students suspended and rank among BPS middle schools, by year

School Name	2001/	2002	2000/2	2001	1999/	2000	1998/	1999	1997/	1998
	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
Harbor School	1	0.4%	13	6%	1	0%	1	0%	1	0%
Quincy Upper School	2	0.7%	2	2%	10	3%				
Lewenberg Middle	3	1.8%	8	3%	5	1%	9	4%	3	1%
Timilty Middle	4	1.9%	2	2%	16	9%	6	3%	3	1%
McCormack Middle	5	3.1%	2	2%	15	8%	15	11%	1	0%
Curley Middle	6	3.6%	2	2%	1	0%	4	1%	11	3%
Gavin Middle	7	5.2%	1	1%	18	10%	15	11%	15	7%
Lewis Middle	8	6.0%	2	2%	5	1%	6	3%	8	2%
Irving Middle	9	9.1%	11	5%	9	2%	5	2%	8	2%
Umana/Barnes Middle	10	9.6%	16	7%	12	4%	9	4%	11	3%
Wilson Middle	11	10.0%	11	5%	13	6%	6	3%	13	4%
Rogers Middle	12	10.1%	13	6%	18	10%	12	5%	8	2%
Taft Middle	13	14.2%	16	7%	18	10%	18	14%	17	11%
Cleveland Middle	14	15.4%	19	10%	16	9%	14	10%	16	10%
Edwards Middle	15	16.7%	2	2%	10	3%	12	5%	14	6%
King Middle	16	17.1%	13	6%	21	14%	15	11%	19	16%
Edison Middle	17	18.4%	18	8%	14	7%	19	15%	17	11%
Shaw Middle	18	28.5%	20	19%	5	1%	20	24%	20	18%
Thompson Middle	19	29.1%	10	4%	1	0%	9	4%	3	1%
Dearborn Middle	20	29.7%	8	3%	5	1%	1	0%	3	1%
Wheatley Middle	21	45.8%	21	37%	1	0%	1	0%	3	1%

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#### Pilot elementary school suspensions

In the last five school years, Mission Hill School and Young Achievers School have suspended only one student each. They join seven regular BPS elementary schools that have not suspended any students or have suspended only one student during this time. The Lyndon School has suspended 0%, 2%, 5%, 1%, and 2% of its students in the past five years, ranking near the middle among elementary schools for number of students suspended.

<u>Table 12. Student suspensions: Percentage of students suspended and rank among BPS</u> elementary schools, by year

School Name	2001/2002		2000/2001 199		1999/	1999/2000		1998/1999		1997/1998	
	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	
Mission Hill School	1	0%	30	1%	1	0%	1	0%	1	0%	
Young Achievers	1	0%	2112	0%	1	0%	1	0%	1	0%	
Lyndon Elementary	42	2%	30	1%	71	5%	52	2%	1	0%	

#### STUDENT PERFORMANCE

While student engagement measures a school's holding power, or a school's ability to attract and engage students, a second way to measure student success is to measure student performance across a range of indicators. Student achievement may be measured in three ways: (1) outcome measures on standardized tests, (2) measures of school graduation rates, college attendance, and other quantitative indicators of achievement, and (3) outcome measures on performance assessments such as portfolios and exhibitions. This section presents information on the first two categories of student achievement:

- MCAS results from the 1999/2000 to the 2001/2002 school year<sup>13</sup>
- Outcomes of 2000/2001 graduates
- Percent of senior class that graduated from 2000/2001
- Grade retention rates



<sup>&</sup>lt;sup>12</sup> Young Achievers' ranking reflects that the school suspended 1 student, although the percentage was less than .05% of its student population.

<sup>&</sup>lt;sup>13</sup> Data for this analysis is taken from the Massachusetts Department of Education, November, 2002 publication of MCAS results, available on their website at http://www.doe.mass.edu/mcas/results.html.

# Comparison on BPS and Pilot Schools on MCAS Scores<sup>14</sup>

Finding: Ten of the eleven Pilot Schools score comparably or better than the district average in the MCAS English Language Arts and Math tests. Pilot high schools score consistently above non-examination BPS high schools in scaled scores and percentage of students passing. Four of the five Pilot middle schools are among the top performing schools in the district, as are both elementary schools (other than the one school which had fewer than 10 students take the exam).

MCAS is a criterion referenced test administered by subject. We examined 4<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, and 10<sup>th</sup> grade English/Language Arts and Math scores as a school aggregate. Scores are divided into four levels: 1) Warning/Failing (200-220), 2) Needs Improvement (221-240), 3) Proficient (241-260), and 4) Advanced (261-280). Students must score in level 2 or above in the 10<sup>th</sup> grade exam to be eligible to receive a high school diploma.

#### MCAS Comparison of Boston Pilot Schools and Other BPS Schools at Grade 10

This section compares the six Boston Pilot high schools<sup>15</sup> with all Boston high schools. Scores are compared across the last three years of MCAS (1999/2000-2001/2002).

MCAS 10th Grade English Language Arts-2001/2002

Pilot high schools performed well when compared to other Boston Public high schools. BAA, Fenway, and Health Careers Academy scored just behind the examination schools in total scaled score, percentage of students in advanced and proficient, and percentage of students passing in English Language Arts. These schools were three of only seven total schools (including the three examination schools) that scored above the system average in total scaled scores (229). New Mission High School and Boston Evening Academy were also in the top half of all non-examination schools when ranked by scaled scores.

<sup>&</sup>lt;sup>15</sup> Two Pilot high schools, Greater Egleston Community High School and Boston Evening Academy, were exempted from taking the MCAS by the Massachusetts Department of Education until the 2001-2002 school year, as they are ungraded schools enrolling over-age students.



2

<sup>&</sup>lt;sup>14</sup> We present MCAS data because MCAS is the assessment used by the state of Massachusetts to determine school probationary performance and student high school graduation. The Center for Collaborative Education affirms that the current MCAS is a test and not a comprehensive assessment system; that a single score on a test should never stand as the sole measure of a student's knowledge, understandings, performance, and intellectual habits; that the use of a single test for high stakes decisions is not educationally defensible; and that more appropriate accountability systems are possible. Although the MCAS is currently used as one way to assess and monitor each student's progress, we believe the MCAS has limitations as a research instrument, and should be used in conjunction with multiple measures of authentic assessment.

Table 13. 2001/2002 MCAS English Language Arts Results for Pilot High Schools

	2002 Scaled Score	2001 Scaled Score	2000 Scaled Score	Change in scaled score, 2002 from 2000	2002 Percent scoring Advanced or Proficient	2002 Percent Passing
*Boston Latin	260	259	252	8	98	99
*Latin Academy	251	249	243	8	89	100
*O'Bryant	245	238	232	13	75	99
Boston Arts Academy	240	236	223	17	55	89
Fenway	236	234	217	19	50	91
Health Careers Academy	233	234	226	7	37	83
Snowden International	231	223	219	12	29	82
East Boston High	229	226	214	15	28	71
West Roxbury High	229	224	212	17	30	78
New Mission	227	232	210	17	14	69
Brighton High	227	224	213	14	23	64
Boston Evening Academy	226			N/a	15	68
Charlestown High	226	226	208	18	19	58
Egleston Community High	223			N/a	15	46
Boston High	223	220	212	11	14	51
English High	223	222	209	14	12	57
Dorchester High	222	219	208	14	12	45
South Boston High	222	215	208	14	14	48
Burke High	221	222	216	5	10	42
McKinley	219			N/a	11	31
Madison Park High	218	218	206	12	4	30
Hyde Park High	216	220	209	7	7	34

<sup>\*</sup> Examination School

Figure 8 shows the changes in performance on the English Language Arts portion of the MCAS exam. Averages<sup>16</sup> are given for Pilot Schools, Examination Schools, Boston Public School non-examination schools (and non-pilots), and BPS schools (includes examination schools but not pilot schools). Pilot Schools score consistently above non-examination BPS high schools and have shown greater improvement in scaled scores over the three years (15 points) when compared to all other schools (10 for exam schools and 13 for other BPS schools).





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<sup>&</sup>lt;sup>16</sup> Only schools with scores for each of the three years are included.

Change in English Language Arts MCAS scaled scores, 2000-2002 280 270 260 -Pilot Avg MCAS scaled score × 252 250 -BPS Avg X-242 240 BPS (w/no examination schools) 234 230 230 -∺-- Examination School Avg. 224 220 210 200 2000 2001 2002 Year

Figure 8: Change in English Language Arts scaled score from 1999/2000-2001/2002

#### MCAS 10th Grade Mathematics-2001/2002

Pilot high schools performed well when compared to other Boston Public high schools. BAA and Fenway scored just behind the examination schools in total scaled score, percentage of students in advanced and proficient, and percentage of students passing in Mathematics. These schools were two of only six total schools (including the three examination schools) that scored above the system average in total scaled scores (224). HCA is in the top third and New Mission High School is in the top half of all non-examination schools when ranked by scaled scores.



Table 14. 2001/2002 MCAS Mathematics Results for Pilot High Schools

	2002 Scaled Score	2001 Scaled Score	2000 Scaled Score	Change in scaled score, 2002 from 2000	2002 Percent scoring Advanced or Proficient	2002 Percent Passing
*Boston Latin	261	259	261	0	97	100
*Latin Academy	254	254	251	3	62	98
*O'Bryant	244	247	235	9	90	99
Boston Arts Academy	233	228	213	20	38	71
Charlestown High	227	229	209	18	21	53
Fenway	226	230	209	17	11	69
Snowden International	223	224	212	11	8	59
West Roxbury High	223	220	209	14	12	55
Health Careers Academy	222	226	217	5	7	46
East Boston High	221	222	209	12	10	40
New Mission	220	221	205	15	6	43
Brighton High	220	222	207	13	9	44
Boston High	218	217	210	8	6	30
English High	218	217	207	11	5	28
Burke High	218	222	211	7	6	36
South Boston High	217	215	208	9	7	29
Boston Evening Academy	216				4	21
Egleston Community High	216				0	31
Dorchester High	215	218	205	10	4	21
Madison Park High	215	218	202	13	1	16
McKinley	215				3	19
Hyde Park High	211	213	203	8	1	17

<sup>\*</sup> Examination School

Figure 9 shows the changes in performance on the Mathematics portion of the MCAS exam. Averages<sup>17</sup> are given for Pilot Schools, Examination Schools, Boston Public School non-examination schools (and non-pilots), and BPS schools (includes examination schools but not pilot schools). Pilot Schools score consistently above non-examination BPS high schools and have shown greater improvement in scaled scores over the three years (14 points) when compared to all other schools (4 for exam schools and 11 for other BPS schools).

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<sup>&</sup>lt;sup>17</sup> Only schools with scores for each of the three years are included.

Change in Mathematics MCAS scaled scores, 2000-2002 280 270 260 Pilot Avg MCAS scaled score **☆ 253** 250 <u>v=249</u> BPS Avg 240 BPS (w/no examination schools) Avg 230 226 220 219 210 200 2000 2001 2002 Year

Figure 9: Change in mathematics scaled score from 1999/2000-2001/2002

#### MCAS Comparison of Boston Pilot Schools and Other BPS Schools at Grade 8

MCAS 8th Grade Mathematics-2001/2002<sup>18</sup>

Pilot Middle Schools performed well when compared to other Boston Public Middle Schools. Lyndon, Josiah Quincy, and Young Achievers scored just behind the examination schools in total scaled score, percentage of students in advanced and proficient, and percentage of students passing in Mathematics. The Harbor School, which had among the top non-examination school scaled score in 2000, ranked near the bottom of the middle schools.

<sup>&</sup>lt;sup>18</sup> There were not enough students at Mission Hill Pilot School or Horace Mann schools for school data to be released.



Table 15. 2001/2002 MCAS Mathematics Results for Boston Grade 8

*Boston Latin		2002 Scaled Score	2001 Scaled Score	2000 Scaled Score	Change in scaled score	2002 Percent scoring Advanced or Proficient	2002 Percent Passing
Lyndon	*Boston Latin	251	256	252	-1		99
Lyndon         235         88           *O'Bryant         232         241         230         2         28         85           Mary Lyon         232         31         85         27         64           Quincy Upper School         228         27         64         64           Young Achievers         228         26         63         27         64           Young Achievers         228         225         221         7         24         62           Hernandez         227         228         213         14         22         61           McKay         224         226         214         10         6         63           Rogers Middle         223         220         213         10         12         50           McComack Middle         221         220         209         12         10         44           Umana/Barnes Middle         221         220         209         11         10         43           Shaw Middle         220         222         209         11         4         56           Shaw Middle         220         221         213         7         11 <td< td=""><td>*Latin Academy</td><td>245</td><td>246</td><td>243</td><td>2</td><td>67</td><td>96</td></td<>	*Latin Academy	245	246	243	2	67	96
*O'Bryant 232 241 230 2 28 85  Mary Lyon 232		235				35	88
Mary Lyon   232   228   227   64		232	241	230	2	28	
Quincy Upper School         228         27         64           Young Achievers         228         26         63           Timilty Middle         228         225         221         7         24         62           Hernandez         227         228         213         14         22         61           McKay         224         226         214         10         6         63           Rogers Middle         223         220         213         10         12         50           McCornack Middle         221         220         209         12         10         44           Umana/Barnes Middle         221         220         210         11         10         43           Shaw Middle         220         221         213         7         6         37           Greenwood         220         221         213         7         6         37           Edison Middle         220         219         213         7         11         38           Lewis Middle         219         218         208         11         8         36           King Middle         219         217         210		232				31	85
Timilty Middle         228         225         221         7         24         62           Hernandez         227         228         213         14         22         61           McKay         224         226         214         10         6         63           Rogers Middle         223         220         213         10         12         50           McCormack Middle         221         220         209         12         10         44           Umana/Barnes Middle         221         220         210         11         10         43           Tobin         220         222         209         11         4         56           Shaw Middle         220         221         213         7         6         37           Greenwood         220         223         209         11         7         37           Greenwood         220         223         209         11         7         37           Greenwood         220         223         209         11         7         37           Greenwood         220         213         7         11         38           Lewis	Quincy Upper	228				27	64
Timilty Middle         228         225         221         7         24         62           Hernandez         227         228         213         14         22         61           McKay         224         226         214         10         6         63           Rogers Middle         223         220         213         10         12         50           McCormack Middle         221         220         209         12         10         44           Umana/Barnes Middle         221         220         210         11         10         43           Tobin         220         222         209         11         4         56           Shaw Middle         220         221         213         7         6         37           Greenwood         220         223         209         11         7         37           Greenwood         220         223         209         11         7         37           Greenwood         220         223         209         11         7         37           Greenwood         220         213         7         11         38           Lewis	Young Achievers	228				26	63
McKay         224         226         214         10         6         63           Rogers Middle         223         220         213         10         12         50           McCormack Middle         221         220         209         12         10         44           Umana/Barnes Middle         221         220         210         11         10         43           Tobin         220         222         209         11         4         56           Shaw Middle         220         221         213         7         6         37           Greenwood         220         223         209         11         7         37           Edison Middle         220         219         213         7         11         38           Lewis Middle         219         218         208         11         8         36           King Middle         219         217         210         9         6         37           Irving Middle         219         221         212         7         7         37           Wilson Middle         219         219         207         12         5         37 </td <td></td> <td>228</td> <td>225</td> <td>221</td> <td>7</td> <td>24</td> <td>62</td>		228	225	221	7	24	62
Rogers Middle         223         220         213         10         12         50           McCormack Middle         221         220         209         12         10         44           Umana/Barnes Middle         221         220         210         11         10         43           Tobin         220         222         209         11         4         56           Shaw Middle         220         221         213         7         6         37           Greenwood         220         223         209         11         7         37           Edison Middle         220         221         213         7         11         38           Lewis Middle         219         218         208         11         8         36           King Middle         219         217         210         9         6         37           Irving Middle         219         221         212         7         7         37           Wilson Middle         219         219         207         12         5         37           Gavin Middle         218         218         208         10         8         34	Hernandez	227	228	213	14	22	61
McCormack Middle         221         220         209         12         10         44           Umana/Barnes Middle         221         220         210         11         10         43           Tobin         220         222         209         11         4         56           Shaw Middle         220         221         213         7         6         37           Greenwood         220         223         209         11         7         37           Edison Middle         220         219         213         7         11         38           Lewis Middle         219         218         208         11         8         36           King Middle         219         217         210         9         6         37           Irving Middle         219         221         212         7         7         37           Wilson Middle         219         221         212         7         7         37           Gavin Middle         219         219         207         12         5         37           Gavin Middle         218         218         208         10         8         34	McKay	224	226	214	10	6	63
Middle         221         220         209         12         10         44           Umana/Barnes Middle         221         220         210         11         10         43           Tobin         220         222         209         11         4         56           Shaw Middle         220         221         213         7         6         37           Greenwood         220         223         209         11         7         37           Edison Middle         220         219         213         7         11         38           Lewis Middle         219         218         208         11         8         36           King Middle         219         217         210         9         6         37           Irving Middle         219         221         212         7         7         37           Wilson Middle         219         221         212         7         7         37           Gavin Middle         219         219         207         12         5         37           Gavin Middle         218         218         208         10         8         34	Rogers Middle	223	220	213	10	12	50
Middle         221         220         210         11         10         43           Tobin         220         222         209         11         4         56           Shaw Middle         220         221         213         7         6         37           Greenwood         220         223         209         11         7         37           Edison Middle         220         219         213         7         11         38           Lewis Middle         219         218         208         11         8         36           King Middle         219         217         210         9         6         37           Irving Middle         219         221         212         7         7         37           Wilson Middle         219         221         212         7         7         37           Wheatley Middle         218         216         207         11         5         28           Wheatley Middle         218         220         213         5         5         36           Lewenberg         217         216         209         8         5         29		221	220	209	12	10	44
Shaw Middle         220         221         213         7         6         37           Greenwood         220         223         209         11         7         37           Edison Middle         220         219         213         7         11         38           Lewis Middle         219         218         208         11         8         36           King Middle         219         217         210         9         6         37           Irving Middle         219         221         212         7         7         37           Wilson Middle         219         219         207         12         5         37           Gavin Middle         218         216         207         11         5         28           Wheatley Middle         218         218         208         10         8         34           Taft Middle         218         220         213         5         5         36           Lewenberg Middle         217         216         209         8         5         29           Dearborn Middle         216         216         207         9         4         23		221	220	210	11	10	43
Greenwood         220         223         209         11         7         37           Edison Middle         220         219         213         7         11         38           Lewis Middle         219         218         208         11         8         36           King Middle         219         217         210         9         6         37           Irving Middle         219         221         212         7         7         37           Wilson Middle         219         219         207         12         5         37           Gavin Middle         218         216         207         11         5         28           Wheatley Middle         218         218         208         10         8         34           Taft Middle         218         220         213         5         5         36           Lewenberg         217         216         209         8         5         29           Middle         216         217         205         11         2         25           Cleveland Middle         216         216         206         10         2         26	Tobin	220	222	209	11	4	56
Edison Middle         220         219         213         7         11         38           Lewis Middle         219         218         208         11         8         36           King Middle         219         217         210         9         6         37           Irving Middle         219         221         212         7         7         37           Wilson Middle         219         219         207         12         5         37           Gavin Middle         218         216         207         11         5         28           Wheatley Middle         218         218         208         10         8         34           Taft Middle         218         220         213         5         5         36           Lewenberg Middle         217         216         209         8         5         29           Dearborn Middle         216         217         205         11         2         25           Cleveland Middle         216         216         207         9         4         23           Curley Middle         216         216         206         10         2 <td< td=""><td>Shaw Middle</td><td>220</td><td>221</td><td>213</td><td>7</td><td>6</td><td>37</td></td<>	Shaw Middle	220	221	213	7	6	37
Lewis Middle         219         218         208         11         8         36           King Middle         219         217         210         9         6         37           Irving Middle         219         221         212         7         7         37           Wilson Middle         219         219         207         12         5         37           Gavin Middle         218         216         207         11         5         28           Wheatley Middle         218         218         208         10         8         34           Taft Middle         218         220         213         5         5         36           Lewenberg Middle         217         216         209         8         5         29           Dearborn Middle         216         217         205         11         2         25           Cleveland Middle         216         216         207         9         4         23           Curley Middle         216         216         206         10         2         26           Harbor School         214         217         213         1         1	Greenwood	220	223	209	11	7	37
King Middle         219         217         210         9         6         37           Irving Middle         219         221         212         7         7         37           Wilson Middle         219         219         207         12         5         37           Gavin Middle         218         216         207         11         5         28           Wheatley Middle         218         218         208         10         8         34           Taft Middle         218         220         213         5         5         36           Lewenberg         217         216         209         8         5         29           Middle         216         217         205         11         2         25           Cleveland Middle         216         216         207         9         4         23           Curley Middle         216         216         206         10         2         26           Harbor School         214         217         213         1         1         20           Edwards Middle         214         219         212         2         3         17 <td>Edison Middle</td> <td>220</td> <td>219</td> <td>213</td> <td>7</td> <td>11</td> <td>38</td>	Edison Middle	220	219	213	7	11	38
Irving Middle         219         221         212         7         7         37           Wilson Middle         219         219         207         12         5         37           Gavin Middle         218         216         207         11         5         28           Wheatley Middle         218         218         208         10         8         34           Taft Middle         218         220         213         5         5         36           Lewenberg         217         216         209         8         5         29           Middle         216         217         205         11         2         25           Cleveland Middle         216         216         207         9         4         23           Curley Middle         216         216         206         10         2         26           Harbor School         214         217         213         1         1         20           Edwards Middle         214         219         212         2         3         17           Thompson Middle         214         217         208         6         3         26	Lewis Middle	219	218	208	11	8	36
Wilson Middle         219         219         207         12         5         37           Gavin Middle         218         216         207         11         5         28           Wheatley Middle         218         218         208         10         8         34           Taft Middle         218         220         213         5         5         36           Lewenberg Middle         217         216         209         8         5         29           Middle         216         217         205         11         2         25           Cleveland Middle         216         216         207         9         4         23           Curley Middle         216         216         206         10         2         26           Harbor School         214         217         213         1         1         20           Edwards Middle         214         219         212         2         3         17           Thompson Middle         214         217         208         6         3         26	King Middle	219	217	210	1	6	37
Gavin Middle         218         216         207         11         5         28           Wheatley Middle         218         218         208         10         8         34           Taft Middle         218         220         213         5         5         36           Lewenberg Middle         217         216         209         8         5         29           Dearborn Middle         216         217         205         11         2         25           Cleveland Middle         216         216         207         9         4         23           Curley Middle         216         216         206         10         2         26           Harbor School         214         217         213         1         1         20           Edwards Middle         214         219         212         2         3         17           Thompson Middle         214         217         208         6         3         26	Irving Middle	219	221	212	7	7	37
Wheatley Middle         218         218         208         10         8         34           Taft Middle         218         220         213         5         5         36           Lewenberg Middle         217         216         209         8         5         29           Dearborn Middle         216         217         205         11         2         25           Cleveland Middle         216         216         207         9         4         23           Curley Middle         216         216         206         10         2         26           Harbor School         214         217         213         1         1         20           Edwards Middle         214         219         212         2         3         17           Thompson Middle         214         217         208         6         3         26	Wilson Middle	219	219	207	12	5	37
Taft Middle         218         220         213         5         5         36           Lewenberg Middle         217         216         209         8         5         29           Dearborn Middle         216         217         205         11         2         25           Cleveland Middle         216         216         207         9         4         23           Curley Middle         216         216         206         10         2         26           Harbor School         214         217         213         1         1         20           Edwards Middle         214         219         212         2         3         17           Thompson Middle         214         217         208         6         3         26	Gavin Middle	218	216	207	11	5	28
Lewenberg Middle       217       216       209       8       5       29         Dearborn Middle       216       217       205       11       2       25         Cleveland Middle       216       216       207       9       4       23         Curley Middle       216       216       206       10       2       26         Harbor School       214       217       213       1       1       20         Edwards Middle       214       219       212       2       3       17         Thompson Middle       214       217       208       6       3       26	Wheatley Middle	218	218	208		L	34
Middle     217     216     209     8     3     29       Dearborn Middle     216     217     205     11     2     25       Cleveland Middle     216     216     207     9     4     23       Curley Middle     216     216     206     10     2     26       Harbor School     214     217     213     1     1     20       Edwards Middle     214     219     212     2     3     17       Thompson Middle     214     217     208     6     3     26	Taft Middle	218	220	213	5	5	36
Cleveland Middle         216         216         207         9         4         23           Curley Middle         216         216         206         10         2         26           Harbor School         214         217         213         1         1         20           Edwards Middle         214         219         212         2         3         17           Thompson Middle         214         217         208         6         3         26		217	216	209	8	5	29
Curley Middle         216         216         206         10         2         26           Harbor School         214         217         213         1         1         20           Edwards Middle         214         219         212         2         3         17           Thompson Middle         214         217         208         6         3         26	Dearborn Middle	216	217	205	11	2	25
Harbor School         214         217         213         1         1         20           Edwards Middle         214         219         212         2         3         17           Thompson Middle         214         217         208         6         3         26	Cleveland Middle	216	216	207	9	4	23
Edwards Middle         214         219         212         2         3         17           Thompson Middle         214         217         208         6         3         26	Curley Middle	216	216	206	10	2	26
Thompson Middle 214 217 208 6 3 26	Harbor School	214	217	213	1	1	20
Middle 214 217 208 6 3 26	Edwards Middle	214	219	212	2	3	17
McKinley 214 210 4 19		214	217	208	6	3	26
* Examination School			210			4	19

<sup>\*</sup> Examination School

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# MCAS 7th Grade English Language Arts-2001/2002

Three pilot schools ranked in the top 7 among the 30 non-exam schools taking the 7th grade English Language Arts exam. These ranking applied whether comparing scaled scores, percentage of students in advanced and proficient, or percentage of students passing.)

Table 16. 2001/2002 MCAS English Language Arts results for Grade 7

School	Scaled Score	2002 Percent scoring Advanced or Proficient	2002 Percent Passing
*Boston Latin	254	98	99
Mary Lyon	250	92	100
*Latin Academy	247	88	100
*O'Bryant	246	81	99
McKay	242	66	97
Lyndon	241	63	100
Greenwood	238	57	96
Mission Hill	238	60	100
Tobin	237	56	89
Quincy Upper School	236	45	94
Rogers Middle	235	36	90
Shaw Middle	235	37	81
Edison Middle	233	35	82
Hernandez	233	26	93
Timilty Middle	233	35	91
Wilson Middle	232	28	86
Taft Middle	232	35	72
McCormack Middle	232	32	80
Cleveland Middle	232	33	79
Umana/Barnes Middle	231	27	77
Harbor School	231	22	82
Lewenberg Middle	230	27	78
Gavin Middle	230	23	70
Dearborn Middle	230	23	80
Young Achievers	229	29	64
Irving Middle	229	26	71
Thompson Middle	229	23	76
Edwards Middle	229	21	77
Curley Middle	227	23	68
Lewis Middle	227	20	68
Wheatley Middle	226	14	66
King Middle	226	14	65
McKinley	222	8	44

<sup>\*</sup> Examination School



#### MCAS 6th Grade Mathematics-2000/2002

Among the 30 middle schools, Pilots were the top two, and four of the top ten, in their scores in 6th grade mathematics, whether compared by scaled score, percentage of students in advanced and proficient, or percent passing.

Table 17. 2001-2002 MCAS Mathematics Results for Boston Grade 6

School	Scaled Score	Percent scoring Advanced or	Percent Passing	
		Proficient		
Lyndon	239	50	77	
Quincy Upper School	239	53	80	
Mary Lyon	235	38	76	
Hernandez	230	33	48	
Edison Middle	229	27	47	
Young Achievers	227	27	59	
McKay	226	24	56	
McCormack Middle	226	20	45	
Greenwood	226	15	60	
Mission Hill	226	24	53	
Irving Middle	226	22	48	
Timilty Middle	226	20	47	
Umana/Barnes Middle	225	21	39	
Rogers Middle	224	19	47	
McKinley	222	20	39	
Tobin	221	11	43	
Curley Middle	221	17	30	
Wilson Middle	220	12	34	
Edwards Middle	219	12	36	
Gavin Middle	219	11	30	
Dearborn Middle	218	7	30	
King Middle	218	6	31	
Cleveland Middle	218	9	29	
Lewenberg Middle	218	8	30	
Shaw Middle	218	12	22	
Thompson Middle	217	8	26	
Lewis Middle	217	0	23	
Taft Middle	217	11	22	
Harbor School	216	2	20	
Wheatley Middle	213	1	16	



#### MCAS Comparison of Boston Pilot Schools and Other BPS Schools at Grade 4

Scores are compared across the three years of MCAS (1998/1999-2001/2002<sup>19</sup>). Tables 18-19 present Pilot elementary schools' scaled scores from the 1999/2000-2001/2002 school years, their rankings with other BPS schools, and whether the school's scores improved.

## MCAS 4th Grade English Language Arts

Of the 80 elementary schools with scores, the two Pilot elementary schools that have public MCAS results have shown significant progress in increasing their scores compared to the district. Both schools score above the district average of 227 (not including Pilot School scores), and Lyndon is one of the highest performing schools in the district. Further, they also have among the highest percentage of students passing; 92% of Lyndon 4th graders scored at the passing level (a rank of 11<sup>th</sup>), as did 93% of Young Achievers students (9<sup>th</sup>). Fifty-nine percent of Lyndon 4th graders scored at the advanced or proficient level (4<sup>th</sup>), as did 10% of Young Achievers students (69<sup>th</sup>).

Table 18. MCAS English Language Arts Results for Boston Elementary Pilot Schools

	2002	2002 ELA	2001	2001 ELA	2000	2000 ELA
	ELA	rank	ELA	rank	ELA	rank
Lyndon	240	6	233	16	225	28
Mission Hill					230	8
Young Achievers	230	29	225	57	223	43

### MCAS 4th Grade Mathematics

Similar to our findings on the ELA exam, of the 80 elementary schools with scores, Pilot elementary schools have shown significant progress in increasing their scores compared to the district. Both schools score above the district average of 218 (not including Pilot School scores), are two of the highest performing schools in the district, and have among the highest percentage of students passing. Eighty-two percent of Lyndon 4<sup>th</sup> graders scored at the passing level (a rank of 10<sup>th</sup>), as did 83% of Young Achievers students (9<sup>th</sup>). Forty-two percent of Lyndon 4th graders scored at the advanced or proficient level (5<sup>th</sup>), as did 10% of Young Achievers students (46<sup>th</sup>).

Table 19. MCAS Mathematics Results for Boston Elementary Pilot Schools

	2002 Math	2002 Rank	2001 Math	2001 Rank	2000 Math	2000 Rank
Lyndon	236	5	230	18	227	22
Mission Hill					237	3
Young Achievers	230	18	224	42	223	37

<sup>&</sup>lt;sup>20</sup> Many families at the Mission Hill School chose for their children not to take the examination. Consequently, there were not enough students taking the examination to make the results public.



1

<sup>&</sup>lt;sup>19</sup> For Mission Hill, only data from the 1999-2000 administration are used, as too few students took the exam in other years so that these results are not public.

#### **Grade Retention**

Finding: Pilot Schools have significantly low grade retention rates, a key predictor of dropping out of school. Pilot Schools' favorable scores on the MCAS suggest that these low retention rates are more due to students meeting the requirements for promotion to the next grade, rather than an indication of social promotion.

Grade retention, especially at the secondary grades, is strongly correlated to dropping out of school. Research has shown that students who are retained in grade once have a 20-40% greater chance of dropping out of school, and those who have been retained in grade twice have a 90% greater chance of dropping out of school (Hammack, 1986; Mann, 1986).

Across the Pilot Schools Network, schools reported school year 2000/2001 retention rates ranging from zero to 6.6% of each school's total population, with the average at 2.8%. When broken down by school level, in the 2000/2001 school year, Pilot elementary schools retained 3% of students, Pilot middle schools retained 2.2% of students, and Pilot high schools retained 2.8% of students. In the 2001/2002 school year, only 1 of 4 high schools which had retention data available actually retained any students, and the three elementary schools retained 2.2% of students. Because we were unable to obtain corresponding numbers from the Boston Public Schools for the district, we do not compare Pilot Schools' grade retention rates with BPS grade retention rates. However, initial BPS data suggests that, due to the tougher promotion policies in district high schools which are the result of the high stakes nature of MCAS at the tenth grade, ninth grade retention rates have risen dramatically, and are far greater than the rates of Pilot high schools. Anecdotal evidence suggests that this may be the case in middle schools as well.

While some view low grade retention rates as signs of social promotion in schools, in Pilot Schools these numbers indicate that the vast majority of students are meeting the requirements for promotion to the next grade. The fact that Pilot Schools students in most schools perform as well or better than BPS students on MCAS and Stanford 9, the only measures common to both sets of students, suggests that students are in fact promoted because they meet high standards.

#### Graduates' Future Plans

Finding: Pilot high schools have both high rates of graduation and high rates of students planning to attend college. The rate of Pilot high school graduates planning to attend college, and in particular four-year colleges, is dramatically greater than the BPS district average.

Plans of school graduates are another indicator of school success. The following information was collected from Pilot Schools about the future plans of their 2000/2001 and 2001/2002 school year graduates of both 8<sup>th</sup> and 12<sup>th</sup> grade.

#### Middle School Graduates' Education Plans

We were able to collect graduate plan data on all Pilot middle schools. Two-hundred of the 204 8<sup>th</sup> graders were promoted to the ninth grade. Twenty-five of the 204 graduates (13%) were accepted to examination schools, an indicator of high academic achievement. Forty-one percent



of Pilot 8<sup>th</sup> grade graduates applied to and were accepted by Pilot high schools. We interpret this to suggest that these students have the desire to succeed academically.

Table 20. High School Plans for pilot Middle School 2001/2002 8th graders

High School Plans	Mission Hill	Young Achiever s	Lyndon	Quincy Upper School	Harbor School
# 8th graders in 2000/2001	12	19 (18 promoted)	32 <sup>21</sup>	67	74
# 8th graders promoted who were accepted and matriculated to exam schools	4 (0 matriculat ed)	4 (4 matriculat ed)	7 (5 matriculat ed)	6	4
# 8 <sup>th</sup> graders promoted who went to Pilot high schools	8	11	2	52 <sup>22</sup>	8
# 8th graders promoted who went to non-pilot BPS high schools			13	6	56
# 8 <sup>th</sup> graders promoted who went to other schools	4	3	10	6	6

#### **High School Graduates' Education Plans**

All six Pilot high schools had graduating 12<sup>th</sup> graders in 2000/2001, including the first graduating class from the Boston Arts Academy. According to Pilot high schools, an average 90.7% of their 12<sup>th</sup> grade students in 2000/2001 graduated. Graduation rates ranged from 81% to 100% of Pilot Schools 12<sup>th</sup> graders.

The plans of high school graduates for both Pilot and regular BPS high schools are self reported. System-wide data for 2001 was reported at the Massachusetts Department of Education web site (<a href="http://profiles.doe.mass.edu">http://profiles.doe.mass.edu</a>). Seventy-four percent of Pilot Schools graduates in 2001 planned to enroll in two- or four-year colleges, as compared with only 59% system-wide. Of these numbers, 50% of Pilot Schools graduates enrolled in four-year colleges, compared with 33.7% system-wide, and 24% of Pilot Schools graduates enrolled in two-year colleges, compared with 25.5% system-wide. Eighteen percent of Pilot Schools graduates reported going to work, compared with 8% system-wide. The high rates of Pilot Schools graduates planning to pursue post-secondary education suggests that Pilot Schools are preparing students well for college, and that Pilot School students have high academic aspirations for themselves.

For the 2002/2003 school year, data has been collected from Fenway, Health Careers Academy, New Mission High, Boston Arts Academy, and Boston Evening Academy. Ninety-two percent of seniors from the first three schools graduated<sup>23</sup>. Seventy-nine percent of graduates plan on

<sup>&</sup>lt;sup>23</sup> Boston Evening Academy is an ungraded school. In addition, we do not have data from BAA for this indicator.



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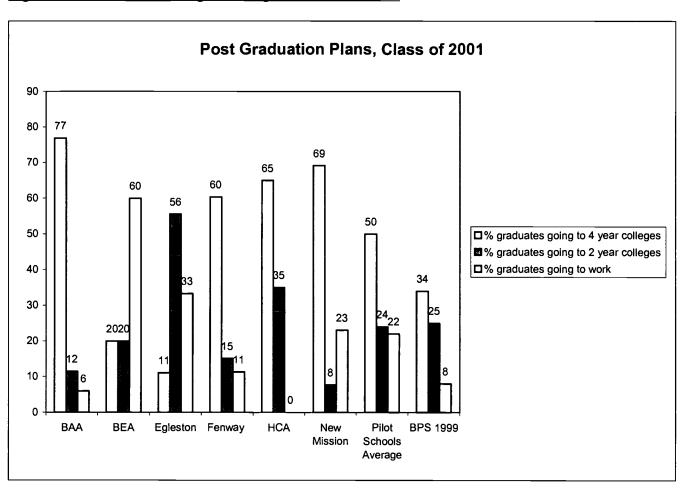
<sup>&</sup>lt;sup>21</sup> We were unable to obtain high school enrollment data for two students.

<sup>&</sup>lt;sup>22</sup> All 52 students continued at Josiah Quincy Upper School.

attending 2- or 4-year colleges (57% to 4-year colleges, 17% to two-year colleges, and 5% unspecified), 7% to work, 2% to further training, and the remainder undecided.

Two of the Pilot high schools deserve special attention. Both BEA and Egleston serve a student population that is older, and one in which many students have previously dropped out of non-Pilot Schools. A significant percentage of the students work and/or have children. The fact that these two schools have graduation rates of 83% and 90%, respectively, in 2000/2001 indicates success, since many of these students would otherwise not have completed high school diplomas. While the percentages of graduates in these schools pursuing postsecondary education are lower than other Pilot Schools, a significant percentage do plan to go on to two or four year colleges.

Figure 10. Future Plans of high school graduates, 2000/2001<sup>24</sup>

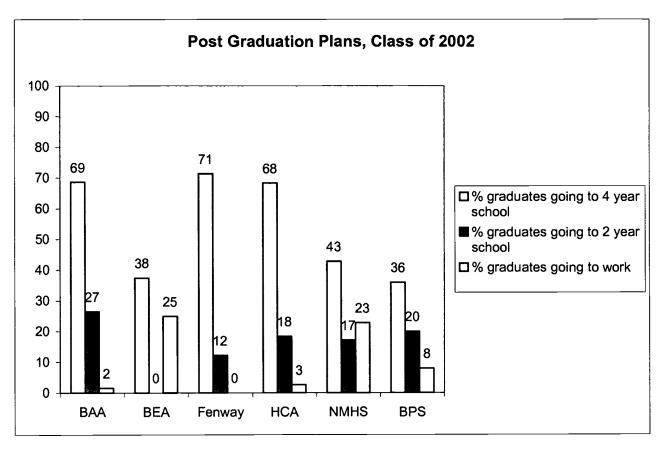


<sup>&</sup>lt;sup>24</sup> Note that figures for each school in this chart may not add up to 100%, as the chart does not include data from students who reported other plans or no plans.



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Figure 11. Future Plans of high school graduates, 2001/2002<sup>25</sup>



#### **DISCUSSION**

This report presents data that show that Pilot Schools are among the top performing of all Boston public schools, based on a variety of measures of student achievement and student engagement. This success takes place with a Pilot student population that is generally representative of the larger BPS student population.

#### Pilot Schools:

- Have among the highest daily student attendance of all BPS schools
- Have among the highest total number of students on waiting lists to enroll in the school
- Have among the fewest transfers out of school
- Have among the lowest percentage of students suspended
- Are among the top performing schools in Boston on the MCAS
- Graduate a high percentage of their students
- Send a high percentage of their graduates to college

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<sup>&</sup>lt;sup>25</sup> Figures for Boston Evening Academy indicate the percent of students going to college. No data was available on whether the college was 2- or 4-years.



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It is our premise that Pilot Schools perform so well because they are small and they have the autonomy to create conditions which research has found to improve student learning (Cotton, 1995).

When you have a small school, the problems are still there, but the power of the community of a small school can help where the kids can be swept into a world that is not just their peers ...Kids can join a grownup culture because the size is such that an adult intellectual culture can be built. (Pilot School director, New England Small Schools Network forum, 2000)

Pilot Schools are able to (1) personalize students' learning environment and (2) provide teachers with sufficient, flexible blocks of time to collaborate and plan together. As documented in another recent study on the use of Pilot Schools' freedom over budget, staffing, and scheduling to meet student needs, specific practices of the Pilot Schools that contribute to their success include:

- Pilot Schools are all small schools, serving fewer than 500 students
- Although Pilot Schools are small, many still create even smaller learning communities within the schools so that the students and adults form close, personalized, multi-year relationships
- Class sizes are smaller than those in most BPS schools
- Student to teacher ratios are substantially lower than in most BPS schools
- Pilot Schools have longer instructional periods and total instructional time than most BPS schools
- Pilot faculty have significantly greater collaborative planning time to improve teaching and learning than most BPS schools
- Pilot Schools have student advisories, another means by which relationships can form among small groups of students and between students and adults

The Boston Pilot Schools have begun to demonstrate that when urban public schools are provided increased autonomy and flexibility to adopt innovative practices, and are held accountable for their results, student outcomes across a range of indicators improve. These findings have significant implications for the future of urban public education and suggest a movement toward creating small schools and providing these schools with greater autonomy over their resources as a key vehicle for improving urban student engagement and performance.



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## **APPENDIX A**

\* Signifies Pilot School
\*\* Signifies Exam School

Elementary schools (79)

Adams Elementary	Grew Elementary	Mozart Elementary
Agassiz Elementary	Guild Elementary	Murphy Elementary
Alighieri Elementary	Hale Elementary	O'Donnell Elementary
Baldwin Elementary	Haley Elementary	O'Hearn Elementary
Bates Elementary	Hamilton Elementary	Ohrenberger Elementary
Beethoven Elementary	Harvard/Kent	Otis Elementary
Blackstone Elementary	Hennigan Elementary	Patrick Kennedy
Bradley Elementary	Hernandez Elementary	Pauline Shaw
Channing Elementary	Higginson Elementary	Perkins Elementary
Chittick Elementary	Holland Elementary	Perry Elementary
Clap Elementary	Holmes Elementary	Philbrick Elementary
Condon Elementary	Hurley Elementary	Quincy Elementary
Conley Elementary	Jackson/Mann	Roosevelt Elementary
James Curley	John F Kennedy	Russell Elementary
Dever Elementary	Kenny Elementary	Sarah Greenwood
Dickerman Elementary	Kilmer Elementary	Stone Elementary
Elihu Greenwood	Lee Elementary	Sumner Elementary
Eliot Elementary	*Lyndon Elementary	Taylor Elementary
Ellis Elementary	Lyon Elementary	Tobin Elementary
Emerson Elementary	Manning Elementary	Trotter Elementary
Endicott Elementary	Marshall Elementary	Tynan Elementary
Everett Elementary	Mason Elementary	Warren/Prescott
Farragut Elementary	Mather Elementary	Winship Elementary
Fifield Elementary	Mattahunt Elementary	Winthrop Elementary
Fuller Elementary	McKay Elementary	*Young Achievers ES
Gardner Elementary	Mendell Elementary	
Garfield Elementary	*Mission Hill Elementary	

Not included: McKinley Elementary



#### Middle schools (21)

Cleveland Middle	King Middle	Rogers Middle
Dearborn Middle	Lewenberg Middle	Taft Middle
Edison Middle	Lewis Middle	Thompson Middle
Edwards Middle	M Curley Middle	Timilty Middle
Gavin Middle	McCormack Middle	Umana/Barnes Middle
*Harbor School	*Quincy Upper School	Wheatley Middle
Irving Middle	R.G. Shaw Middle	Wilson Middle

In addition, the three examination schools, Boston Latin, Latin Academy, and O'Bryant, and seven K-8 schools, including the three Pilot elementary schools, were included in comparisons of standardized achievement data (MCAS). They were not included in other middle school comparisons because we received school level, not grade level, school indicator data.

Not included: McKinley Middle, Community Academy, Middle Academy

#### High schools (24)

Another Course to College	Charlestown High	**Latin Academy	
Boston Adult Academy	Dorchester High	Madison Park High	
*Boston Arts Academy	East Boston High	*New Mission	
*Boston Evening Academy	*Egleston Community High	**O'Bryant	
Boston High	English High	Snowden International	
**Boston Latin	*Fenway Middle College	South Boston High	
Brighton High	*Health Careers Academy	West Roxbury High	
Burke High	Hyde Park High		

Not included: McKinley Technical, McKinley Vocational, Carter Center, Explusion Alt Sch/Prog, Community Academy



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